ARMORED MEDICAL RESEARCH LABORATORY

FORT KNOX, KENTUCKY

Report On

PROJECT NO. 23 - Test of Non-Skid Paint on Tanks

INFORMATION COPY
Action copies have been forwarded to Requirements Section, AGF for approval and execution.

6/3/44

Project No.23

3 June 1944

ARMORED MEDICAL RESEARCH LABORATORY
Fort Knox, Kentucky

Project No. 23
411.6 SPMEA

3 June 1944

1. PROJECT: No. 23, Test of Non-Skid Paint on Tanks.

a. Authority: 2nd Indorsement, Commanding General, Army Ground Forces, 411.6 (25 Oct 43) GNRQT-10/59218.

b. Purpose: To determine the practical usefulness of applying a so-called non-skid paint to the exterior of tanks as a means of providing better footing and reducing the danger of slips and falls among tank crews.

2. DISCUSSION:

a. There is some danger of slips and falls in climbing on the sloping front and side deck surfaces on the M4 medium tank. This has resulted in accidents from time to time among tank crews in training. The likelihood of such accidents is increased when the tank is wet and muddy.

b. The so-called non-skid paint provides a roughened surface in the form of moderately coarse mineral particles dispersed in the paint. These particles project above the surface and are held securely by the binding material. The paint was developed expressly for the purpose of providing a safe footing on metal and other surfaces.

c. The value of the subject paint as a means of improving footing on tanks operating under field conditions was investigated at Fort Knox during the Winter and Spring months when maximum conditions of rain and mud occur. A total of six tanks were subjected to field trial for periods of operation up to six weeks by the Armored Board and ARTC, and the usefulness of the paint determined.

3. CONCLUSIONS:

a. The non-skid paint provides an improved walking surface when dry and free from a dirt layer.

b. The non-skid paint surface insures an improved footing in the rain, provided the surface is free from mud and shoes are clean.

c. The non-skid quality of the paint is rapidly lost with accumulation of mud on the tank, owing to the fact that the projecting mineral particles are covered by the mud layer.

d. Accumulation of mud on the shoes also effectively destroys the usefulness of the paint.

e. The non-skid paint was observed to increase the slipping hazard when the tank was partially coated with mud. This is explained by the fact that when suddenly stepping onto the slippery muddy surface from the clean non-skid surface, one is unprepared for the loss of footing.

f. In view of the fact that a non-skid surface is particularly desired in muddy operations, the subject paint has little practical usefulness.

4. RECOMMENDATIONS:

That non-skid paint not be considered for use on the exterior surfaces of tanks.

(NOTE: The conclusions and recommendations set forth above have been concurred in by Headquarters, Armored Center, W.H. Nutter, Colonel, G. S. C., Chief of Staff

Submitted by:
Theodore F. Hatch, Lt. Col., SnC

APPROVED Willard Machle
WILLARD MACHLE,
Colonel, Medical Corps,
Commanding.